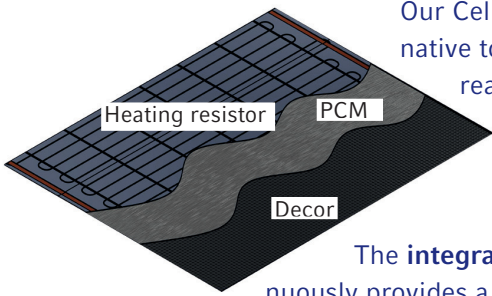


FEELING COMFORTABLE AT ROOM TEMPERATURES OF ONLY 14°C - THANKS TO RADIANT HEAT

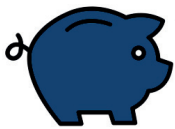


Our Cello® Heating Panel is an **energy-saving** alternative to conventional supplementary heating. The reason: The Cello® Heating Panel generates radiant heat that creates comfort - even at a low general room temperature.



The **integrated phase change material (PCM)** continuously provides a constant heat output. By changing from one phase to another, the PCM can release or absorb a large amount of heat, allowing the system to bridge longer periods without power supply.

WHAT ARE THE ADVANTAGES OF THE CELLO HEATING PANEL?



The Cello® Heating Panel makes **energy savings of approx. 20%** possible since the room temperature can be lowered by about 6°C – while maintaining the same level of comfort.



Radiated heat is perceived as **more constant** and thus more comfortable than heat provided by hot air blowers. This **enhances the ambient quality** of the interior space - creating **extra comfort** for passengers and driver alike.

Comfortable radiant heat instead of annoyingly loud hot-air blower. Heat-radiating elements ensure improved heat retention compared to hot air, which will quickly escape whenever the doors are opened. With the heating panel there is no unpleasant temperature change when the doors are opened.



Significant potential **CO₂ savings**. As they are electric-powered, the Cello® Heating Panels work independently of the drive engine, hence their operation is locally emission-free.

Already with 10% of the interior surface covered by our heating panels, you can achieve a significant improvement in **comfort**. Optimum system design is reached with approx. 20% of the interior surface. For the best results, the heating surfaces should be distributed throughout the room (as a headliner, side wall or floor mat).



A component test is to be carried out for the overall assembly.

Our test of the overall assembly with a standard fiberglass composite structure passed ECE R 118.02, appendix 6, 7 and 8.

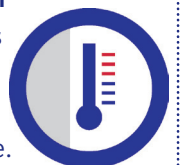


Delivery includes a **12 v or 24 v control system**, which is easy to integrate and operates independently of the vehicle controls.

Ideal solution for city buses, municipal vehicles, utility vehicles, rail vehicles, construction machinery, mobile homes, emergency vehicles...



When combined with Cello® Heating Panels, a **room temperature of 14°C is sufficient** to provide a comfortable ambiance and a feel-good climate.



CELLO HEATING PANEL

Thermal comfort refers to a room condition in which people perceive the surface temperature as well as the temperature, humidity level and movement of the air in their environment as pleasant.

No more than about 10 m² of Cello® Heating Panel are required to keep a city bus with an air volume of 50 m³ at the right temperature. As it continuously radiates a constant level of heat, the Cello® Heating Panel provides a comfortable climate, even if the air in the room is as cool as 14°C.

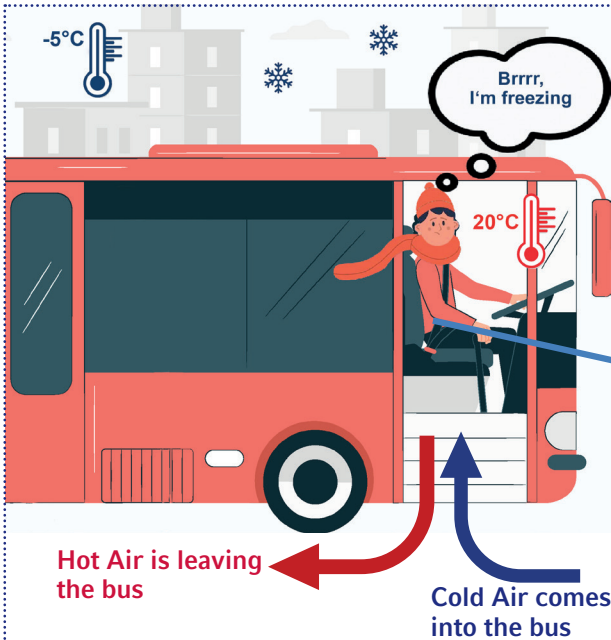
Electric-powered vehicles & CO2 savings



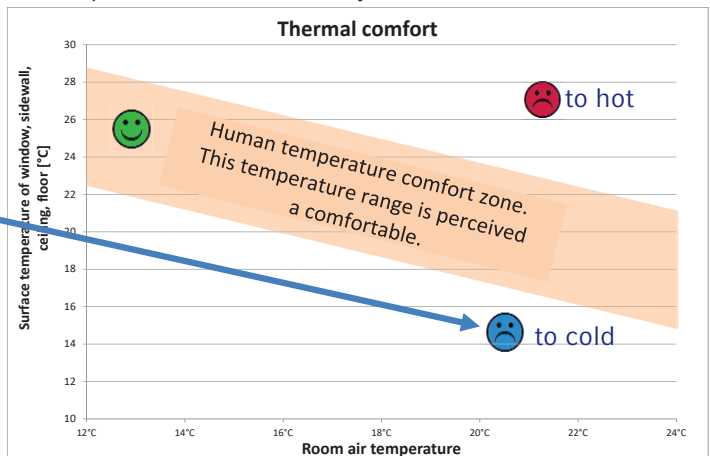
In particular during the cold season, heating systems tend to drain a good portion of the valuable - because limited - battery power.

Conventional panel heaters will only provide heat while energized. Our Cello® Heating Panel with integrated latent heat storage material (PCM = Phase Change Material), on the other hand, will provide heat also when no electric power is available - a revolutionary concept for efficient vehicle heating.

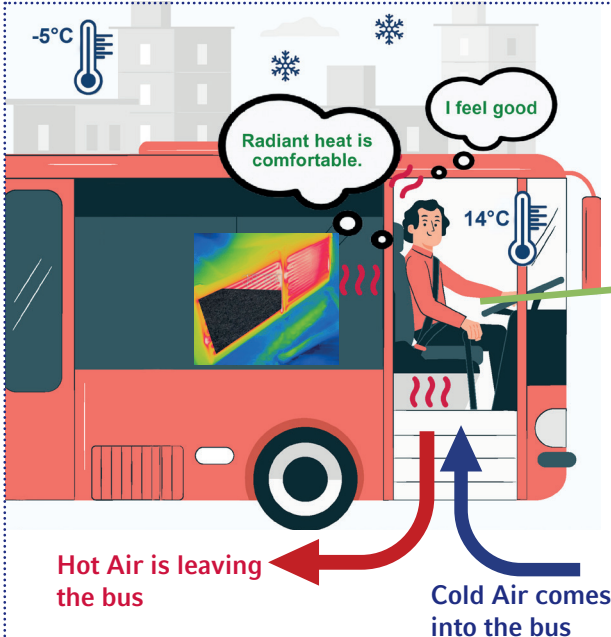
Without Cello® Heating Panel



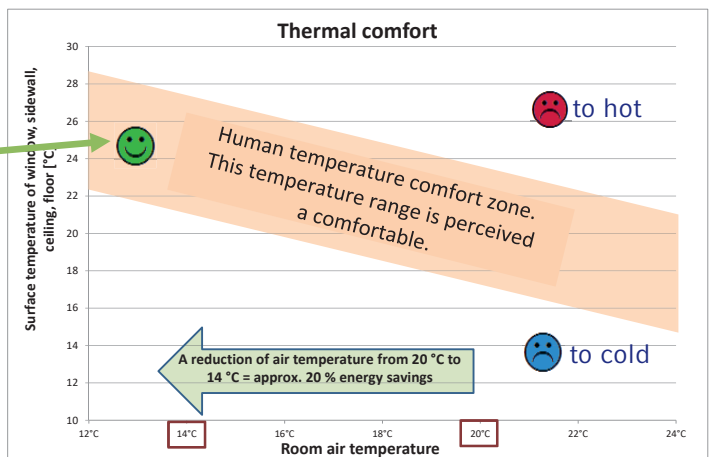
Previous heating solutions have a direct impact only on the air temperature of a given room, not on the temperature of interior surfaces. This means that, especially in winter, the heaters have to give off a lot of heat to get the entire space up to a comfortable temperature. But heat is costly.



With Cello® Heating Panel



With the Cello® Heating Panel you can influence the temperature of both the air and the surfaces in a given space. The optimization of both parameters at the same time allows you to provide a comfortable ambience even at a low room air temperature.



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